

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions of the claims in the application.

1. (Currently Amended) An anaerobically curable composition comprising:

(a) a cyanate ester compound having the structure of formula I:

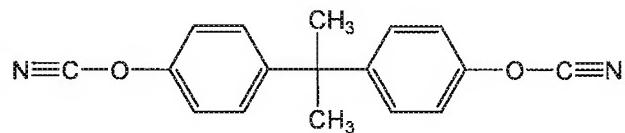


wherein m is from 2 to 5 and R<sup>1</sup> is an aromatic nucleus-containing residue; and

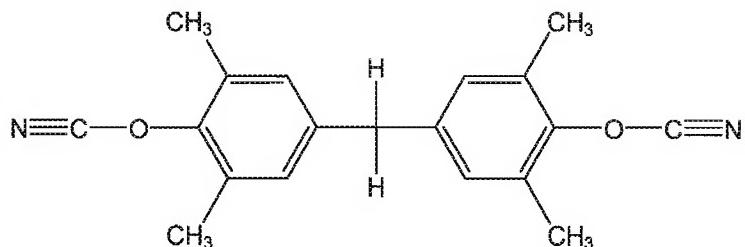
(b) a (meth)acrylate monomer; and  
(c) an anaerobic cure inducing composition comprising peroxide and saccharin, wherein said composition is free of added metallic catalyst.

2. (Currently Amended) The anaerobically curable composition of claim 1, wherein said cyanate ester compound is selected from the group consisting of 1,3-dicyanatobenzene; 1,4-dicyanatobenzene; 1,3,5-tricyanatobenzene; 1,3-, 1,4-, 1,6-, 1,8-, 2,6- or 2,7-dicyanatonaphthalene; 1,3,6-tricyanatonaphthalene; 4,4'-dicyanato-biphenyl; bis(4-

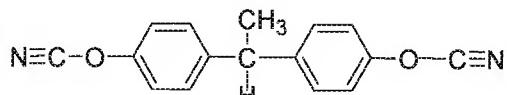
cyanatophenyl)methane; 3,3',5,5'-tetramethyl, bis(4-cyanatophenyl)methane; 2,2-bis(3,5-dichloro-4-cyanatophenyl)propane; 2,2-bis(3,5-dibromo-4-dicyanatophenyl)propane; bis(4-cyanatophenyl)ether; bis(4-cyanatophenyl)sulfide; 2,2-bis(4-cyanatophenyl)propane; tris(4-cyanatophenyl)-phosphite; tris(4-cyanatophenyl)phosphate; bis(3-chloro-4-cyanatophenyl)methane; cyanated novolac; 1,3-bis[4-cyanatophenyl-1-(methylethyldene)]benzene, cyanated, bisphenol-terminated polycarbonate,



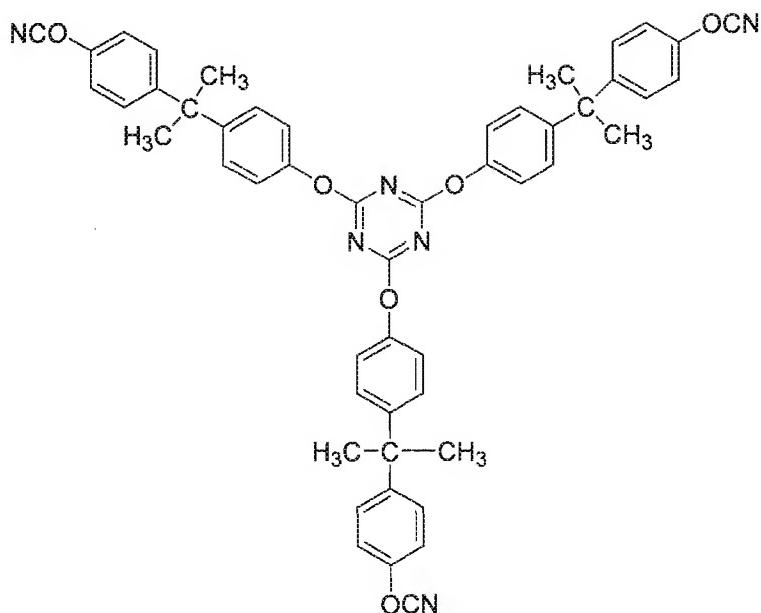
"AROCY" B-10 ;



"AROCY" M-30 ;



"AROCY" L10; and



"AROCY" B-30.

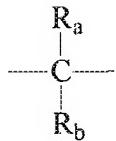
and combinations thereof.

3. (Currently Amended) The anaerobically curable composition of claim 1, wherein R<sup>1</sup> is derived from an aromatic hydrocarbon.

4. (Currently Amended) The anaerobically curable composition of claim 1, wherein R<sup>1</sup> is selected from the group consisting of benzene, biphenyl, naphthalene, anthracene and pyrene.

5. (Currently Amended) The anaerobically curable composition of claim 1, wherein R<sup>1</sup> is derived from a polynuclear aromatic hydrocarbon in which at least two aromatic rings are bonded to

each other through a bridging member, wherein said bridging member has the formula:



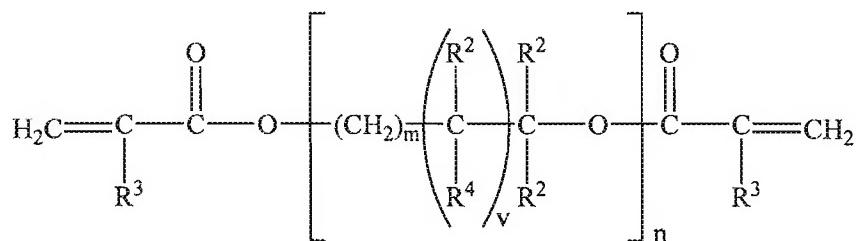
wherein  $R_a$  and  $R_b$  are the same or different and each represents a hydrogen atom or an alkyl group containing 1 to 4 carbon atoms.

6. (Currently Amended) The anaerobically curable composition of claim 1, wherein  $R^1$  is derived from novolac-type phenolic resins.

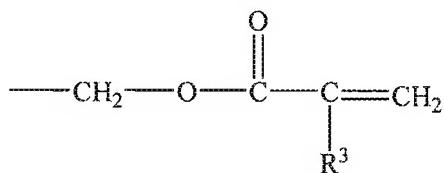
7. (Currently Amended) The anaerobically curable composition of claim 1, wherein said (meth) acrylate monomer is selected from the group consisting of polyethylene glycol di(meth)acrylates, tetrahydrofuran (meth)acrylates, di(meth)acrylates, hydroxypropyl (meth)acrylate, hexanediol di(meth)acrylate, trimethylol propane tri(meth)acrylate, diethylene glycol di(meth)acrylate, triethylene glycol di(meth)acrylate, tetraethylene glycol di(meth)acrylate, dipropylene glycol di(meth)acrylate, di-(pentamethylene glycol) di(meth)acrylate, tetraethylene diglycol di(meth)acrylate, diglycerol tetra(meth)acrylate, tetramethylene di(meth)acrylate,

ethylene dimethacrylate, neopentyl glycol diacrylate, trimethylol propane triacrylate, bisphenol-A di(meth)acrylates, ethoxylated bisphenol-A (meth)acrylate and combinations thereof.

8. (Currently Amended) The anaerobically curable composition of claim 1, wherein said (meth)acrylate monomer has the formula:

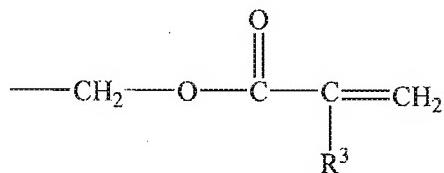


wherein R<sup>2</sup> may be selected from hydrogen, alkyl of 1 to about 4 carbon atoms, hydroxyalkyl of 1 to about 4 carbon atoms or



R<sup>3</sup> may be selected from hydrogen, halogen, and alkyl of 1 to about 4 carbon atoms;

R<sup>4</sup> may be selected from hydrogen, hydroxy and



m is an integer equal to at least 1;

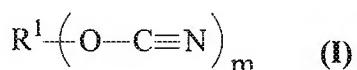
n is an integer equal to at least 1; and

v is 0 or 1.

9. (Currently Amended) The anaerobically curable composition of claim 1, further comprising a free radical initiator.

10. (Currently Amended) An anaerobically curable composition comprising:

(a) a cyanate ester compound having the structure of formula I:

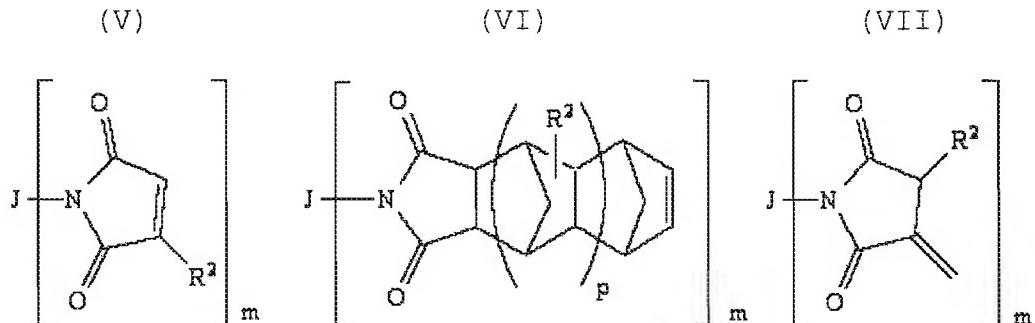


wherein m is from 2 to 5 and R<sup>1</sup> is an aromatic nucleus-containing residue;

(b) a (meth)acrylate monomer;

(c) one or more maleimides, nadimides or itaconimides

selected from the group consisting of the following structures:



wherein m = 1-15, p = 0-15, R<sup>2</sup> is independently selected from the group consisting of hydrogen or and lower alkyl, and J is

independently selected from the group consisting of a monovalent or a polyvalent moiety comprising organic or organosiloxane radicals, and combinations thereof; and

(d) an anaerobic cure-inducing composition comprising peroxide and saccharin,  
wherein said curable composition is free of added metallic catalyst and ~~wherein said curable composition~~ cures at room temperature when placed between two surfaces such that an anaerobic environment is created in the area between the two surfaces, at least one of which surfaces having an active metallic surface.

11. (Currently Amended) The anaerobically curable composition of claim 1, further comprising an inorganic filler.

12. (Currently Amended) An anaerobically curable composition comprising the reaction product of

(a) a cyanate ester compound having the formula:

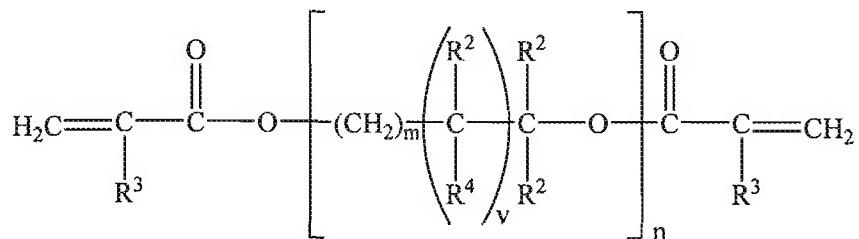


wherein m is from 2 to 5 and R<sup>1</sup> is an aromatic nucleus-containing residue;

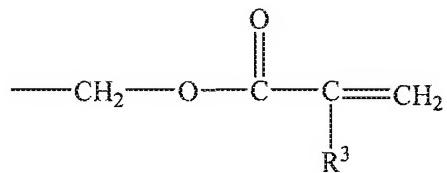
- (b) a (meth)acrylate monomer, wherein said composition is free of added metallic catalyst;
- (c) an anaerobic cure inducing composition comprising peroxide and saccharin; and
- (d) an active metallic surface, wherein said composition is free of added metallic catalyst.

13. (Currently Amended) The anaerobically curable composition of claim 12, wherein said active metallic surface is selected from the group consisting of zinc, copper, cadmium, iron, nickel, alloys thereof, steel and stainless steel.

14. (Currently Amended) The anaerobically curable composition of claim 12, wherein said (meth)acrylate monomer has the formula:

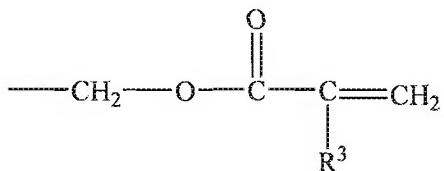


wherein R<sup>2</sup> ~~may be~~ is selected from the group consisting of hydrogen, alkyl of 1 to about 4 carbon atoms, hydroxyalkyl of 1 to about 4 carbon atoms ~~or~~ and



$\text{R}^3$  ~~may be~~ is selected from the group consisting of hydrogen, halogen, and alkyl of 1 to about 4 carbon atoms;

$\text{R}^4$  ~~may be~~ is selected from hydrogen, hydroxy and



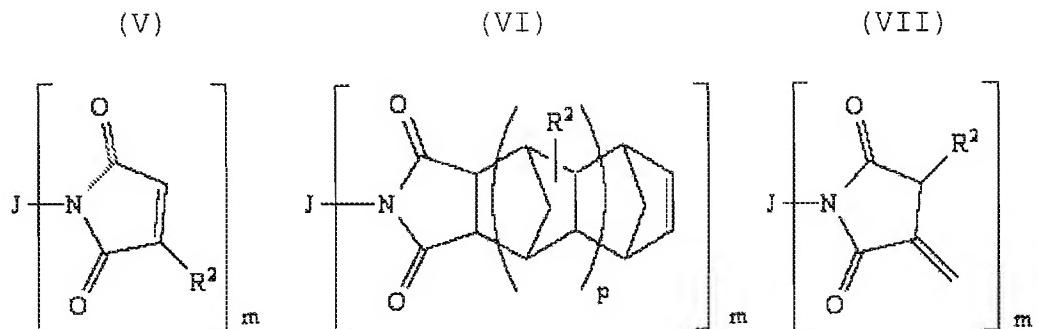
$m$  is an integer equal to at least 1;

$n$  is an integer equal to at least 1; and

$v$  is 0 or 1.

15. (Currently Amended) The anaerobically curable composition of claim 12, further comprising a free radical initiator.

16. (Currently Amended) The anaerobically curable composition of claim 12 further comprising one or more maleimides, nadimides or itaconimides selected from the group consisting of the following structures:

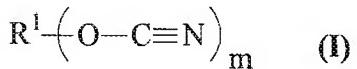


wherein m = 1-15, p = 0-15, each R<sup>2</sup> is independently selected from the group consisting of hydrogen or lower alkyl, and J is a monovalent or a polyvalent moiety comprising organic or organosiloxane radicals, and combinations thereof.

17. (Currently Amended) A method for bonding metallic surfaces comprising:

- (a) providing activated metallic mating surfaces;

(b) applying to at least one of said mating surfaces an anaerobically curable composition comprising a cyanate ester compound having the formula:



wherein m is from 2 to 5 and R<sup>1</sup> is an aromatic nucleus-containing residue and an anaerobic cure inducing composition comprising peroxide and saccharin, wherein said composition is free of added metallic catalyst; and

(c) mating said surfaces and allowing said anaerobically curable composition to cure therebetween.

18. (Currently Amended) An article of manufacture comprising: substrates, at least one of which having active metallic surfaces and an anaerobically curable composition therebetween to adhesively join the substrates to one and the other, wherein the anaerobically curable composition comprises a cyanate ester compound and an anaerobic cure inducing composition comprising peroxide and saccharin, and said composition is free of added metallic catalyst.

19. (Withdrawn) The article of manufacture according to claim 18, wherein said article is a threaded fastener.

20. (Withdrawn) The article of manufacture according to claim 18, wherein said article comprises a nut and a bolt.

21. (Currently Amended) A cured composition formed by the process of:

(a) providing a substrate having an active metallic surface and

(b) applying an anaerobically curable composition therebetween wherein the anaerobically curable composition comprises a cyanate ester compound and an anaerobic cure inducing composition comprising peroxide and saccharin, wherein said composition is free of added metallic catalyst; and

(c) subjecting said composition to anaerobic conditions suitable to effectuate cure.

22. (Currently Amended) A method for producing threadlocking matable parts said method comprising the steps of:

(a) applying an anaerobically composition comprising a cyanate ester compound and an anaerobic cure inducing composition comprising peroxide and saccharin, free of added metallic catalyst to at least a portion of an engagement surface of a matable part which is matably engageable with a complimentary engagement structure;

(b) mating said complimentary engagement structures;

(c) subjecting said composition to anaerobic conditions suitable to effectuate cure at room temperature, thereby forming threadlocked matable parts.

23. (Currently Amended) A method of providing a multi-staging curable composition to obtain increased thermal resistance comprising the steps of

(a) combining curable components, said components comprising:

(i) a first curable component comprising an anaerobically curable monomer, said monomer curing at ambient temperature;

~~(b)~~ (ii) second curable component comprising a cyanate ester; and

~~(c)~~ (iii) a third curable component comprising a maleimide which cures at about 200°C or more and which imparts heat-aged strength retention at 600°C; and with

~~(d)~~ an anaerobic cure-inducing composition comprising peroxide and saccharin to form an anaerobically curable composition;

wherein said anaerobically curable composition is free of added metallic catalyst;

(b) providing two surfaces at least one of which surfaces having an active metallic surface; and

(c) applying the anaerobically curable composition onto one or both of the two surfaces and allowing the anaerobically curable composition to ~~wherein said curable composition cures at~~

room temperature when ~~placed between two surfaces~~ an anaerobic environment is created in the area between the two surfaces at least one of which having an active metallic surface.

24. (Currently Amended) An anaerobically curable composition for obtaining increased thermal resistance and heat-aged strength retention comprising:

- (a) an anaerobically curable monomer;
- (b) a cyanate ester;
- (c) a maleimide; and
- (d) an anaerobic cure-inducing composition comprising

peroxide and saccharin,  
wherein said anaerobically curable composition is free of added metallic catalyst and ~~wherein said curable composition~~ cures at room temperature when placed between two surfaces such that an anaerobic environment is created in the area between the two surfaces, at least one of which surfaces having an active metallic surface.

25. (Currently Amended) An anaerobically curable composition comprising:

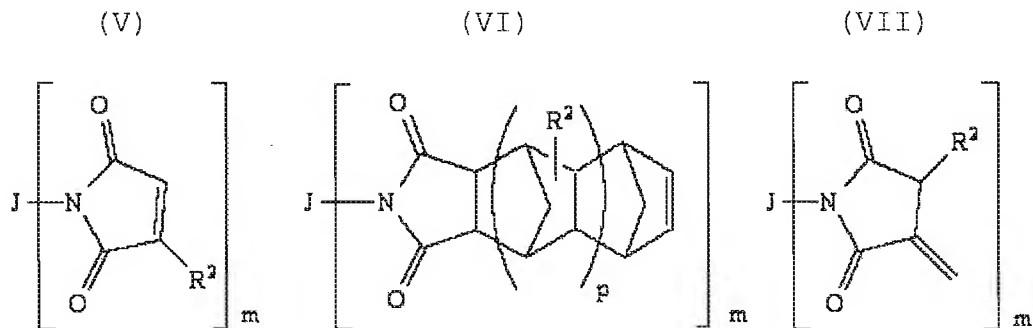
- (a) a cyanate ester compound having the structure of formula I:



wherein m is from 2 to 5 and R<sup>1</sup> is an aromatic nucleus-containing residue;

- (b) a (meth)acrylate monomer;
  - (c) one or more maleimides, nadimides or itaconimides

selected from the group consisting of the following structures:



wherein m = 1-15, p = 0-15, each R<sup>2</sup> is independently selected from the group consisting of hydrogen or lower alkyl, and J is a monovalent or a polyvalent moiety comprising organic or organosiloxane radicals, and combinations of two or more thereof, and wherein said composition is free of added metallic catalyst; and

- (d) an anaerobic cure-inducing composition comprising  
peroxide and saccharin,  
wherein said curable composition cures at room temperature when  
placed between two surfaces such that an anaerobic environment

is created in the area between the two surfaces, at least one of which surfaces having an active metallic surface.